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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HUYNH, SON P

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/164,427

Applicant(s)

AFSHARY ET AL.

Examiner

Son P. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,9,10,12,25-28,30,32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,9,10,12,25-28,30,32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 0989 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-5, 7, 9-12, 25-28, 30-33 have been considered but are moot in view of the new ground(s) of rejection.

Claims 6, 8, 11, 13-24, 29 and 31 have been cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 5, 7, 9-10, 12, 25-28, 30, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carhart (US 6,622,304 B1).

Regarding claim 1, Carhart teaches a digital coaxial cable LAN (figure 5) for communicating data between clients (21,22) of the cable LAN, the cable LAN comprising:

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a plurality of clients (21,22 –figure 5);

a plurality of universal client interface adapters (26,27 –figure 5), one universal client interface adapter (27) in communication with at least one client (e.g. TV 22) and in communication with at least one other universal client interface adapter (26) (figure 5 or figure 6; col. 11, lines 9-56);

at least one coaxial cable (23 –figure 5) coupled between a pair of universal client interface adapters (26 and 27), the at least one coaxial cable having an operating frequency spectrum, the operating frequency spectrum having at least a first portion (frequency band f_1 from a nearly CATV system into home – col. 9, lines 1-14) and a second portion, the second portion operating at a frequency greater than 860 MHz (frequency band f_2 and f_3 –col. 11, lines 10-41); and
at least one carrier modulated digital signal having a signal operating frequency that occupies the second portion of the operating frequency spectrum of the coaxial cable, the at least one carrier modulated digital signal transmitted in the coaxial cable coupled between the pair of universal client interface adapters (col. 11, lines 7-41; col. 13, line 50-col. 14, lines 19-67). However, Carhart does not specifically disclose a frequency greater than 1350 MHz.

The skilled engineer can select any operating frequency above 860 MHz to transmit signals on a coaxial cable in compliance with FCC regulations but limited to the capability and characteristics of the transmission medium and devices communicating on the medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart's system to include the frequency to be of any value such as 1350 or

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greater so long as the frequency desired is in compliance with FCC regulations but limited to the capability and/or characteristics of the transmission medium and devices communicating on the medium.

Regarding claim 2, Carhart additionally teaches at least one of the plurality of universal client interface adapters is integrated into a client of the cable LAN (e.g. the interface 26 is integrated into PC 21 of in home network 20 – figure 5).

Regarding claim 3, Carhart further teaches the at least one carrier modulated digital signal is an in-home signal (signal transmitted in f1 and f2 bands – col. 11, lines 10-41) and the coaxial cable (23) is tapped off of a public cable network (cable network 24- figure 5).

Regarding claim 4, Carhart additionally teaches a low pass filter (30 – figures 2-3) coupled upstream of the in home signal (col. 9, lines 35-46).

Regarding claim 5, Carhart further teaches the low pass filter having a cut off frequency less than 1000 MHz (low pass filter 30 having a cut off frequency of 750MHz – col. 9, lines 35-42).

Regarding claim 7, Carhart additionally teaches the at least one carrier modulated digital signal is an in home signal (signals transmitted in f2 and f3 band in the in home network – col. 11, lines 8-45), the cable LAN (in home

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network) further comprising a low pass filter (30) coupled upstream of the in home signal to a public cable network (24) – see figures 2-3), wherein the carrier modulated digital signal is generated downstream of the low pass filter (generated by interface 26 downstream of LPF 30 – figures 2-3, 5 and col. 11, lines 8-41).

Regarding claim 9, Carhart further discloses the frequency is greater than 860 MHz (col. 11, lines 10-40).

The skilled engineer can select any operating frequency above 860 MHz to transmit signals on a coaxial cable in compliance with FCC regulations but limited to the capability and characteristics of the transmission medium and devices communicating on the medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart's system to include the frequency to be of any value such as 1350 or greater so long as the frequency desired is in compliance with FCC regulations but limited to the capability and/or characteristics of the transmission medium and devices communicating on the medium.

Regarding claim 10, Carhart in view of Terry teaches a cable LAN as discussed in the rejection of claim 9. Carhart further discloses the carrier modulated digital signal operating frequency is greater than 860 MHz (col. 11, lines 10-40).

However, Carhart does not specifically disclose a frequency greater than 1350 MHz.

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The skilled engineer can select any operating frequency in any range to transmit signals on a coaxial cable in compliance with FCC regulations but limited to the capability and characteristics of the transmission medium and devices communicating on the medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart's system to include the frequency to be of any value of range such as between 1350 MHz and 2000 MHz so long as the frequency desired is in compliance with FCC regulations but limited to the capability and/or characteristics of the transmission medium and devices communicating on the medium.

Regarding claim 12, Carhart further teaches the "signal operating frequency" has a bandwidth of at least 5 MHz (col. 1, lines 62-65).

Regarding claim 25, Carhart discloses a method for communicating data between a first universal client interface adapter (26) and a second universal client interface adapter (27) coupled by a coaxial cable (23) – figure 5, the method comprising:

receiving digitized data in the universal client interface adapter (26) from a client (21) – figure 5 and col. 11, lines 8-32);

processing the data within the first client interface adapter (26) into a modulated signal having a signal operating frequency that is greater than 860 MHz (col. 11, lines 8-32); and

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communicating the modulated signal from the first universal client interface adapter (26) to the second universal client interface adapter (27) through coaxial cable (23) – col. 11, lines 8-41; col. 13, line 12, lines 24-56 and figure 5.

However, Carhart does not specifically disclose a frequency greater than 1350 MHz.

The skilled engineer can select any operating frequency above 1000 MHz to transmit signals on a coaxial cable in compliance with FCC regulations but limited to the capability and characteristics of the transmission medium and devices communicating on the medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Carhart's system to include the frequency to be of any value such as 1350 or greater so long as the frequency desired is in compliance with FCC regulations but limited to the capability and/or characteristics of the transmission medium and devices communicating on the medium.

Regarding claim 26, Carhart further teaches:

modulating the digitized data into an analog wave form (NTSC video from, PAL format, etc. – col. 11, lines 8-32; col. 12, lines 25-45);

converting the modulated data into a analog signal having an intermediate (col. 11, lines 8-32; col. 12, lines 25-56);

increasing the intermediate frequency to a frequency (f_2) that is greater than the signal cut off frequency (f_1) – col. 11, lines 8-32; col. 12, lines 40-50). Carhart further discloses the video signal is next transmitted via a duplex filter 75 out of

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the port 700 onto the attached coaxial cable 23 (col. 12, lines 50-56 and figure 7).

Necessarily, the power of the signal is amplified to transmit the video signal.

Regarding claim 27, the additional limitation as claimed corresponds to the additional limitation as claimed in claim 10, and are analyzed as discussed with respect to the rejection of claim 10.

Regarding claim 28, the limitations of a cable LAN as claimed correspond to the limitations of method as claimed in claim 25 and are analyzed as discussed in the rejection of claim 25.

Regarding claims 30 and 32, the additional limitations as claimed corresponds to the additional limitations as claimed in claims 10, 12, and are analyzed as discussed with respect to the rejection of claims 10, 12.

Regarding claim 33, Carhart further teaches the normal coaxial cable system transmits signals external to the cable LAN (see figures 5, col. 9, line 60-col. 10, line 2).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Sohner et al. (US 5,018,165) discloses communication system using spread spectrum and leaky transmission line.

Dail (US 5,963,844) discloses hybrid fiber-coax system having at least one digital fiber node and increased upstream bandwidth.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher C. Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPH
June 15, 2005



CHRIS GRANT
PRIMARY EXAMINER